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10/697,449	10/30/2003	Sridhar Gollamudi	LUCW-0008/FLE Gollamudi 7	7972
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EXAMINER				
MEHRA, INDER P				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/697,449

Applicant(s)

GOLLAMUDI ET AL.

Examiner

INDER P. MEHRA

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/7/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-17 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-17 and 19-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Paper No(s)/Mail Date. _____
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to amendment dated: 7/10/2008. Based on this application, claims 1-23 are pending, out of which claims 3 and 18 have been cancelled and claims 1, 9 and 16 have been amended.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 4/9/2008 was filed. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 5-11, 14-17 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Reudink et al** (US Pub. No. 20040235527), hereinafter, Reudink in view of **Walton et al** (US Patent No. 6,744,743), hereinafter Walton.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(c), (f) or (g) prior art under 35 U.S.C. 103(a).

For claims 1, 9 and 16, **Reudink** teaches that a communication system (**Reudink teaches system to optimize data throughput in wireless communications network, refer to Abstract and figs. 1, 2A-2D, 3A-3C and 4, paragraph 0014**) ,comprising:

a beam former (**form multiple beams, paragraphs 0052 and 0054**) that is adapted to provide a plurality of beams (forming **multiple antenna beams, abstract, paragraphs 0014 and 0092**), each of the plurality of beams providing communication for a corresponding coverage envelope (**coverage in area 360, paragraph 0014**), the plurality of coverage envelopes comprising at least one pair of overlapping coverage envelopes (**overlapping, paragraph 0014**) and at least one pair of non-overlapping coverage envelopes (**non-overlapping, paragraphs 0014**); and

--the scheduler being adapted to assign the same system resources from the group of shared system resources for use during a simultaneous data transmission to a receiver in each of the coverage envelopes (**simultaneous use of two or more beams—is possible and are easily achievable refer to**

paragraph 0020) that comprises the at least one pair of non-overlapping coverage envelopes (**use of CDMA to code share a single resource among multiple users, refer to paragraph 0052**);

non-overlapping coverage envelop, (**non-overlapping antenna beams to provide directional wireless signal coverage, refer to paragraph 0014 and abstract**); (**Note: Reudink uses a code as a single source to multiple users who may at different coverage areas.**);

wherein the group of shared system resources comprises a group of channelization codes, (**Reudink teaches channels to allow code sharing of RF channels, paragraphs 0025 and 0052**).

Reudink does not teaches explicitly the following limitations, which are disclosed by Walton, as follows:

a scheduler (**schedule terminals and assign channels, paragraph 0118**) that assigns system resources from a group of shared system resources to a plurality of receivers distributed throughout the coverage envelopes (**scheduling of resources by using Code Division Multiplexing, paragraph 0061**),.

It would have been obvious to the person of ordinary skill in the art at the time the invention to use a scheduler that assigns system resources from a group of shared system resources to a plurality of receivers distributed throughout the coverage envelopes, as taught by Walton. The combination of non-overlapping coverage area with sharing of resources could be implemented by Base Station. The motivation for using this capability was to achieve increased capacity and/or desired levels of throughput, quality of service.

For claims 2, 10 and 17, **Reudink in view of Walton teaches all the limitations of subject matter and ,further, teaches**, "The communication system set forth in claim 1, wherein the communication system comprises a fixed beam network", (**Fixed Beam Arrays, paragraph 0050**).

For claim 11, **Reudink in view of Walton teaches all the limitations of subject matter, as applied to claim 9, as above;**

Reudink, further, teaches, The communication system set forth in claim 9, as above, the act of defining a group of channelization codes to comprise the group of shared system resources , **(Reudink teaches channels to allow code sharing of RF channels, paragraph 0025).**

For claim 14, **Reudink in view of Walton teaches all the limitations of subject matter, as applied to, The method set forth in claim 9, comprising, and Reudink, further, teaches,** “ the act of transmitting data to at least a subset of the plurality of receivers according to a code division multiple access (CDMA) communication protocol, **(CDMA communication channels to allow code sharing of RF channels among multiple users, refer to paragraph 0025).**..

For claims 5 and 20, **Reudink in view of Walton teaches all the limitations of subject matter, as applied to,** The communication system set forth in claim 1, comprising: at least one antenna for transmitting communication signals to and receiving communication signals from the plurality of receivers, **(Reudink teaches, “multiple antenna beam remote stations”, abstract).**

For claims 6 and 21, **Reudink in view of Walton teaches all the limitations of subject matter, as applied to,** The communication system set forth in claim 1, wherein the communication system comprises a cellular telephone base station, **(Reudink teaches, “cellular communication system including Base Station”, refer to paragraph 0008 and fig. 2A).**

For claims 7 and 22, **Reudink in view of Walton teaches all the limitations of subject matter, as applied to,** The communication system set forth in claim 1, wherein the communication

system comprises a code division multiple access (CDMA) cellular telephone base station.

, (Reudink teaches, “CDMA cellular communication system including Base Station”, refer to paragraph 0009 and fig. 2A).

For claims 8, 15 and 23, **Reudink in view of Walton teaches all the limitations of subject matter, as applied to, claims 1, 9 and 16 respectively, with the exception of following limitations, which are disclosed by Walton, as follows:**

wherein the scheduler prioritizes the plurality of receivers based on at least one scheduling priority metric prior to assigning resources from the group of shared system resources, (**scheduling of receivers based on priority metric, col. 28 line 62 through col. 29 lines 27**),.

It would have been obvious to the person of ordinary skill in the art at the time the invention to use a scheduler prioritizes the plurality of receivers based on at least one scheduling priority metric prior to assigning resources from the group of shared system resources, as taught by Walton. The capability could be implemented by Base Station. The motivation for using this capability was to achieve increased capacity and/or desired levels of throughput, quality of service.

6. Claims 4, 12-13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Reudink in view of Walton** and , further, in view of **Wiedeman et al** (US Pub. No. 2002/0039900), hereinafter, Wiedeman.

For claims 4, 12-13 and 19, **Reudink in view of Walton** teach all the limitations of subject matter , as applied to, “The communication system set forth in claim 1, **Reudink, further, teaches, “wherein the scheduler” (use of CDMA to code share a single resource among multiple users, refer to paragraph 0052);** maintains a list of the group of shared system

resources, (see claims 4, 12-13 and 19), (available resources, paragraph 0067, 0018-0019 and 0052); and

Reudink in view of Walton do not teach the following limitations, which are disclosed by Wiedeman, as follows:

“updates the list as shared system resources are assigned to the plurality of receivers”,
(updated system resources information, paragraph 0181).

It would have been obvious to the person of ordinary skill in the art at the time the invention to use updated list of resources, as taught by **Wiedeman**. The updated list of resources could be implemented by Base Station. The motivation for using this capability was to achieve increased capacity and/or desired levels of throughput, quality of service.

Response to Arguments

7. Applicant's arguments filed 7/10/2008 have been fully considered but they are not persuasive.

Arguments by Applicant

Applicant argues, “the burden of establishing *prima facie* case of obviousness falls on the Examiner. *Exparte Wolters and Kuypers*, 214 U.S.P.Q. 735 (B.P.A.I. 1979). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In *re Royka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). However, it is not enough to show that all the elements exist in the prior art since a claimed invention composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). It is

important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* Specifically, there must be some articulated reasoning with a rational underpinning to support a conclusion of obviousness; a conclusory statement will not suffice. In *re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Indeed, the factual inquiry determining whether to combine references must be thorough and searching, and it must be based on objective evidence of record. In *re Lee*, 61 U.S.P.Q.2d 1430, 1436 (Fed. Cir. 2002)".

Response by Examiner

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, the limitations, as claimed, have been addressed by prior art precisely, as explained above in office action.

Arguments by Applicant

Applicant argues, "Moreover, the Applicant submits that, during patent examination, the pending claims must be given an interpretation that is reasonable and consistent with the specification. See *In re Prater*, 162 U.S.P.Q. 541,550-51 (C.C.P.A. 1969); *In re Morris*, 44 U.S.P.Q.2d 1023, 1027-28 (Fed. Cir. 1997); see also M.P.E.P. § 2111 (describing the standards for claim interpretation during prosecution). Indeed, the specification is "the primary basis for

construing the claims." See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (citations omitted). It is usually dispositive. See *id.* Interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. See *In re Cortright*, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); see also M.P.E.P. § 2111. That is, recitations of a claim must be read as they would be interpreted by those of ordinary skill in the art. See *Rexnord Corp. v. Laitram Corp.*, 60 U.S.P.Q.2d 1851, 1854 (Fed. Cir. 2001); see also M.P.E.P. § 2111.01. In summary, an Examiner, during prosecution, must interpret a claim recitation as one of ordinary skill in the art would reasonably interpret the claim in view of the specification. See *In re American Academy of Science Tech Center*, 70 U.S.P.Q.2d 1827 (Fed. Cir. 2004)".

Response by Examiner

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not mentioned specifically in applicant's argument, as above. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Arguments by Applicant

In sharp contrast, Reudink and Walton, alone or in combination, do not disclose anything with respect to assigning the same system resources from the group of shared system resources for use during a simultaneous data transmission, wherein the same system resources comprise a group of channelization codes, as set forth in the claims. Specifically, **Reudink simply discloses implementation of CDMA to code share (i.e., use coding to share) RF channels among**

multiple users. See Reudink, paragraph 25. Thus, in contrast to the claimed subject matter of the instant application, Reudink discloses multiplexing multiple codes within a single beam and not the same channelization code being assigned for simultaneous use in non-overlapping coverage envelopes. As such, Reudink does not disclose all the features of independent claims 1, 9 and 16.

The Walton reference fails to overcome the deficiencies of Reudink with respect to independent claims 1, 9 and 16. Walton discloses an adaptive reuse scheme wherein resources may be reallocated to match system conditions. See Walton, col. 9, lines 16-40. However, there is nothing in Walton that discloses assigning the same system resources from the group of shared system resources for use during a simultaneous data transmission, wherein the same system resources comprise a group of channelization codes, as set forth in the instant claims. As such, Walton cannot possibly overcome the deficiencies of Reudink with respect to the independent claims 1, 9 and 16.

Response by Examiner

In response, examiner states that Reudink teaches channels to allow code sharing of RF channels, paragraphs 0025 and 0052. Further, Reudink teaches simultaneous use of two or more beams (same as simultaneous data transmission, as claimed)—is possible and are easily achievable refer to paragraph 0020 that comprises use of CDMA to code share a single resource among multiple users (same as sharing code), refer to paragraph 0052.

Arguments by Applicant

Reudink, Walton and Wiedeman, taken alone or in combination, fail to disclose all the elements of independent claims 1, 9 and 16 and cannot support a prima facie case of obviousness

under Section 103. Based on their respective dependencies from independent claims 1, 9 and 16, Applicants respectfully request withdrawal of the Section 103 rejection and allowance of claim 4, 12-13 and 19.

Response by Examiner

In response, Examiner states that Reudink, Walton and Wiedeman, taken alone or in combination, disclose explicitly all the elements of claims 1-2, 4-17 and 18-23 and support a prima facie case of obviousness under Section 103, as above.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed toINDER P. MEHRA whose telephone number is (571)272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Inder P Mehra/
Examiner, Art Unit 2617

/Dwayne D. BOST/
Supervisory Patent Examiner,
Art Unit 2617